

China and must have been a vagrant which may have reached Celebes via the Philippines. There are however no records from the Philippines of *E. s. chinensis* as an occasional migrant, although it has been recorded from Malaya, Natuna Islands and Sarawak. The Celebes specimen may be a genuine vagrant but it seems unsafe to accept it as such in view of the history of anomalous specimens in Hose's collection.

Fregata andrewsi. Hose lists two females under the name *F. aquila*. At that time four species were confused under the latter name. Lowe (1924: 306) lists one of these specimens and identifies it as *F. andrewsi*. Peters (1931: 95) includes Celebes in the range of the latter, presumably following Lowe. Stresemann makes no reference to *F. andrewsi*. in Celebes. He probably overlooked Lowe's re-identification of one of the specimens, and assumed that all old Indonesian records of *F. aquila* are really referable to *F. minor*. *F. andrewsi* occurs at times on the coast of Sarawak and Smythies (1960: 124) reports that seven specimens have been collected there. A large marine bird of this type could no doubt wander to Celebes, and if there were no other questionable birds in Hose's collection from Celebes, the record would probably be acceptable. But since the coast of Sarawak is perhaps the only locality where this species has been regularly recorded away from its breeding places, there is a strong element of doubt about the origin of the Celebes specimens.

In questioning the provenance of these birds in Hose's collection from Celebes, it should be added that I have no knowledge of any similar problems relating to his large collections made in Borneo. Most of the collection from Celebes was clearly correctly labelled, but there was an error in the case of *Dicaeum hosei*, and almost certainly in the three further cases discussed above.

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Undescribed land birds from the Cook Islands, Pacific Ocean

by *D. T. Holyoak*

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During a survey of the birds of the Cook Islands from July-September 1973, the birds of the islands of Atiu, Mitiaro, Mauke and Mangaia were investigated for the first time. Series of seven land birds that apparently represent undescribed forms were collected. This paper gives descriptions of these forms, in advance of a fuller report on their biology and that of the other birds seen.

The specimens collected will be lodged in the National Museum of Natural History, Washington, D.C., excepting one paratype of each new form given to the British Museum (Natural History).

Ptilinopus rarotongensis goodwini subsp. nov.

Description. Adult ♂ and ♀ (sexes similar): differ from *P. rarotongensis* of

Rarotonga, described by Hartlaub & Finsch (1871), in having only a few orange feather tips in the centre of the belly instead of a much larger patch of carmine-red; otherwise very similar. Although only four specimens from Rarotonga were available for comparison, all with the carmine-red patch on the belly, this feature was also noticed on other birds watched at close range on Rarotonga which were not collected.

Type. ♂ with enlarged testes, Atiu, Cook Islands, 14 September 1973. Collected by D. T. Holyoak, field no. 188.

Measurements of type. Wing 134, tail 86, exposed culmen 11, tarsus 22 mm.

Material examined. Besides the type, two ♂♂ with enlarged testes collected at the same locality, 4 September; one ♂ with enlarged testes, two ♀♀ with ovae a little enlarged, and one unsexed bird collected at the same locality, 14 September; a ♂ and ♀ both with enlarged gonads collected at the same locality, 15 September. These all agree with the type in colouration; their measurements are: ♂♂, wing 132, 133, 134, 138, tail 84.5, 87.5, 87.5, 89.5, culmen 9.5, 10, 11, 11, tarsus 24, 25, 25, 25; ♀♀, wing 129, 131, one moulting, tail 82, 84, 85, culmen 10.5, 10.5, 10.5, tarsus 23.5, 24.5, 25; unsexed, wing 128, tail 85, culmen 11, tarsus 25.5 mm.

Name. Named for Derek Goodwin in recognition of his work on pigeons.

Notes. *P. r. goodwini* was common almost everywhere there were trees on Atiu, including the *makatea* region, lowlands inside the *makatea* and higher up in the middle of the island.

Collocalia sawtelli sp. nov.

Description. Adult ♂ and ♀ (sexes similar): ear coverts, forehead, crown and nape black with slight green gloss; mantle, back and rump blackish-brown; shorter upper tail coverts grey-brown with light grey-brown feather bases that are partly exposed; longer upper tail coverts and rectrices blackish-brown to black; wing coverts black with slight green gloss; remiges black with hidden areas blackish-brown; whole underside of body brown-grey; underwing coverts and underside of remiges blackish-brown.

Soft part colours (recorded one day after collecting): bill black, iris blackish-brown to black; legs and feet dark grey-pink or blackish-pink, claws black.

Type. ♀ with small gonads collected in nesting cave, Annataketake Cave, Atiu, Cook Islands, 4 September 1973. Collected by D. T. Holyoak, field number 173.

Measurements of type. Wing 120, tail 55, exposed culmen 4.1, tarsus 9.0 mm.

Material examined. In addition to the type, two ♂♂ and four ♀♀ collected at the same locality the same day, and one ♀ collected at the same locality on 15 September 1973. Measurements: ♂♂, wing 117.5, 118, tail 53, 54.5, culmen 4.1, 4.8, tarsus 9.1, 9.6; ♀♀, wing 115.5, 118, 118.5, 118.5, 119, tail 53, 55, 55.5, 56 (one missing), culmen 3.7, 3.9, 4.0, 4.1, 4.1, tarsus 9.0, 9.1, 9.2, 9.4, 9.6 mm.

Name. Named for Mr. Gordon H. Sawtell, Secretary of the Premier's Department of the Government of the Cook Islands, who told me of this bird soon after my arrival in the Cook Islands and later gave valuable assistance in visiting Atiu and the Annataketake Cave.

Notes. This swiftlet is very similar in appearance to *C. leucophaea* of the Society and Marquesas Islands, although it is slightly darker than specimens of *C. leucophaea leucophaea* from Tahiti. However, whereas *C. leucophaea* nests

in shallow caves and under overhangs of rocky crags and does not echo-locate, *C. sawtelli* nests in the total darkness of deep caves and echo-locates with rapid, loud clicks. Nests of *C. leucophaea* are bulky structures built mainly of mosses whereas those of *C. sawtelli* are shallow cups of dry stems and leaves glued together with saliva which never hardens. As deep caves offering nest sites in total darkness are available to both subspecies of *C. leucophaea*, in Tahiti and the Marquesas Islands, but are not used (Holyoak 1974 and in press) it seems best to accord, *C. sawtelli* specific status.

Halcyon ruficollaris sp. nov.

Description. Adult ♂ and ♀ (sexes nearly alike). Forehead, crown and back of head blue-green with a few buff feathers at sides of forehead; ear coverts light turquoise; superciliary stripe buff, shading to orange-buff behind the eye; lores and cheeks blackish with turquoise feather tips; nape and upper mantle orange-buff, with narrow black half-collar across nape; lower mantle and back blue-green; rump, upper tail coverts and wing coverts deep turquoise; outer primaries black, other remiges black with deep blue outer webs; rectrices deep blue above, blackish beneath and on concealed areas; underside of body entirely white, except for an orange-buff suffusion across upper breast; this band is more distinct in the ♀ specimen than any of the ♂♂; under wing coverts white; underside of flight feathers blackish-grey. The type and another ♂ (no. 123) have narrow tips of pale buff to the median, greater and primary wing coverts that are lacking in the other specimens; these feathers have abraded tips and are probably retained from the immature plumage.

Soft part colours (recorded day after collecting): bill black with pale pink or greyish base on the underside; iris blackish-brown; legs and feet blackish-grey, soles of feet light yellow to yellowish flesh-colour.

Closer to *H. tuta* than to any other species, *H. ruficollaris* is orange-buff on the forehead, nape, superculium and upper breast where *H. tuta* is white. It also has a generally wider tip to the bill than *tuta* and other Polynesian species of *Halcyon*.

Type. ♂ with slightly enlarged testes, Mangaia, Cook Islands, 24 August 1973. Collected by D. T. Holyoak, field no. 124.

Measurements of type. Wing 97, tail 80, culmen from anterior edge of nostril 30.6, width of culmen at anterior edge of nostril 13.4, tarsus 17.0 mm.

Material examined. Besides the type, two ♂♂ and one ♀ collected on Mangaia on the same date, and an unsexed mounted specimen from Mangaia borrowed from the Cook Islands Museum, where it has been for perhaps fifty years. Measurements: ♂♂, wing 97.5, 99, tail 77.5, 77.5, culmen from nostril 29.9, 30.5, culmen width at nostril 13.0, 13.2, tarsus 17.2, 17.3; ♀, wing 101, tail 79, culmen from nostril 30.5, culmen width at nostril 14.0, tarsus 17.9; unsexed specimen, wing 99, tail 79.5, culmen from nostril 30.4, tarsus 18.0 mm.

Name. The name refers to the most distinctive feature of the species.

Notes. I found *ruficollaris* fairly common in the wooded *makatea* region at the north end of Mangaia, and also heard several in groves of trees inland. The usual call is a series of mewing, whistling cries, each consisting of a short note followed by a longer one: *ki-wow ki-wow ki-wow ki-wow*. A few softer chuckling notes were also heard. These calls differ from the noisy chattering of *H. tuta* on Atiu and Mauke and in the Leeward Society Islands (Holyoak 1974).

Halcyon tuta atiu subsp. nov.

Description. Adult ♂ and ♀ (sexes similar): top of head white with a buff tinge, excepting a patch of blue-green feathers in middle of hind crown that extends on to middle of upper nape, and a variable number of small blue-green spots on feather tips of mid-crown; lores blackish; feathers around eye and stripe extending back from eye dull blue; lower nape and upper mantle white tinged buff with narrow black half-collar around nape; lower mantle, back, rump, upper tail coverts and wing dull blue-green to deep cobalt (varying individually); exposed upper parts of remiges and rectrices deep blue-green to deep cobalt, undersides and hidden parts blackish; underparts and underwing coverts entirely white, with faint buffy suffusion on breast and belly.

Colours of soft parts: bill black, except base of mandible which has a large patch of light grey-pink below; iris blackish-brown; legs and feet dark grey to blackish-grey, soles of feet yellow-grey.

Immature ♂: differs from adult in having forehead white with heavy streaks of blackish-brown; entire crown blackish-brown with dull blue feather tips and narrow buff streaks; supercilium pale buff; feathers of rump and upper tail coverts edged buff; wing coverts duller with narrow white fringes; underparts, especially flanks, with heavier buff suffusion. Soft part colours as in adult. Immature ♀ not examined.

Adults differ from those of other populations of *H. tuta* in having the crown mainly white, not blue-green with white confined to the forehead and supercilium. Similarly, the immature ♂ has more extensive light streaking on the forehead and crown.

Type. ♂ with enlarged testes, Atiu, Cook Islands, 15 September 1973. Collected by D. T. Holyoak, field no. 198.

Measurements of type. Wing 103.5, tail 77, culmen from anterior edge of nostril 31.7, width of culmen at anterior edge of nostril 12.5, tarsus 16.5 mm.

Material examined. In addition to the type, five were collected in the same locality, one on 4 September, one on 14 September and three on 15 September. Measurements: ♂♂, wing 94.5, 99, tail 72, 77, culmen from nostril 30.1, 31.0, width of culmen 12.7, 12.8, tarsus 16, 16; ♀♀, wing 98, 98.5, 100, tail 70.5, 70.5, 73.5, culmen from nostril 31.6, 32.5 (one damaged), width of culmen 13.3 (two damaged), tarsus 16, 16.5, 17 mm.

Notes. Common in the wooded *makatea* region of Atiu and in groves of trees inland.

Halcyon tuta mauke subsp. nov.

Description. Adult ♂ and ♀ (sexes similar): resemble *Halcyon tuta* populations of Raiatea, Bora Bora and Huahine in the Leeward Society Islands, but differ in having a buffy wash on the white feathers of forehead, supercilium, sides of neck, mantle, breast, belly and flanks, that is absent or much fainter in those populations.

Colours of soft parts: bill black with pale grey or grey-pink underside to all but tip of lower mandible; iris blackish-brown; legs and feet dark grey to black, soles of feet dull yellow.

Immature ♂ as immature from Leeward Society Islands, except for a stronger orange-buff suffusion on forehead, supercilium, sides of neck, mantle, belly, flanks, tips of rump feathers and fringes to wing coverts.

Soft part colours as in adult. Immature ♀ not examined.

Type. Adult ♀ with small gonads, Mauke, Cook Islands, 28 August 1973. Collected by D. T. Holyoak, field no. 140.

Measurements of type. Wing 99, tail 73.5, culmen from anterior edge of nostril 29.8, width of culmen at anterior edge of nostril 12.1, tarsus 16 mm.

Material examined. In addition to the type, eight other specimens collected at the same locality on the same day. Measurements: ♂♂, wing 93.5, 96, 97, tail 69, 70.5, (one abraded), culmen from nostril 30.4, 30.7, 30.7, width of culmen 11.6, 12.3, 13.0, tarsus 16, 16, 17; ♀♀, wing 95, 97, 98.5, 98.5, 99, tail 71, 71, 72, 72.5, 74, culmen from nostril 28.9, 29.6, 30.2, 30.6, (one damaged), width of culmen 12.2, 12.2, 12.4, 12.5, 12.6, tarsus 16, 16, 16, 16.5, 16.5 mm.

Notes. Common wherever there are trees on Mauke. The specimens of *H. tuta mauke* and *H. tuta atiu* were compared with large series of all other Polynesian kingfishers, and with specimens or descriptions of all other species of the genus *Halcyon*.

Acrocephalus vaughani kerearako subsp. nov.

Description. Adult ♂ (adult ♀ not collected): forehead, crown and nape uniform dark olive, shading to olive on mantle, and olive with tawny suffusion on back and rump; upper tail coverts light yellow-brown; rectrices dark brown, with narrow pale grey tips and narrow olive fringes that soon abrade; feathers around eye light yellow, extending forwards to nostril and backwards a little from the eye to form a short superciliary stripe; cheeks olive; chin, throat and breast pale yellow, shading to light yellow with tawny wash on belly and flanks; thigh feathers pale yellow-brown; under tail coverts pale yellow; remiges dark grey-brown, fringed pale brown on outer webs of primaries, olive on outer webs of secondaries, with pale grey fringes to inner webs and narrow pale grey tips to all but innermost secondaries; wing coverts olive with tawny suffusion; underwing coverts pale yellow.

Soft part colours (recorded one day after collecting): bill blackish with all but tip of lower mandible pink; inside of bill orange; iris dark brown to blackish-brown; legs and feet light blue-grey to blue-grey, soles of feet yellowish.

Type. Male with slightly enlarged testes, Mangaia, Cook Islands, 24 August 1973. Collected by D. T. Holyoak, field no. 132.

Measurements of type. Wing 76.5, tail 79.5, exposed culmen 16.1, tarsus 27.8 mm.

Material examined. Besides the type, two old unsexed specimens from Mangaia loaned by the Cook Islands Museum, Rarotonga, seven other ♂♂ collected on the same day as the type at the same locality and another unsexed bird collected then and preserved in spirit. Measurements (excluding spirit specimen): ♂♂, wing, 76, 76, 76, 76, 77.5, 78, 78, tail 76.5, 78, 78, 78.5, 79, 79.5, 79.5, exposed culmen 15.6, 15.6, 16.0, 16.2, 17.3, (two damaged), tarsus 27.7, 27.7, 28.1, 28.1, 28.1, 28.3, 28.9; unsexed, wing 76.5, 78.5, tail 76.5, 78.5, exposed culmen 15.0, 16.8, tarsus 27.5, 28.6 mm.

Name. 'Kerearako' is the name by which this warbler is known to the people of Mangaia.

Notes. Plentiful in the trees and bushes in and around the *makatea* region of Mangaia, and perhaps also in bushy areas of the interior. *Acrocephalus*

vaughani was hitherto known from Rimitara in the Austral Islands (*A. v. rimitarae*), Pitcairn Island (*A. v. vaughani*) and Henderson Island (*A. v. taiti*), these forms having been described by Murphy & Mathews (1929). From these forms *A. v. kerearako* and the form from Mitiaro described below differ strikingly in showing no tendency to albinism, in having much heavier yellow lipid pigmentation producing yellow underparts and olive upperparts, and in measurements.

Acrocephalus vaughani kaoko subsp. nov.

Description. Adult ♂ and ♀ (sexes similar): slightly larger than *A. v. kerearako*, differing in having entire upperparts and fringes to remiges and rectrices duller, with only slight tawny tinge on back and rump: underparts paler yellow, with indistinct streaking of light grey-brown present on throat and breast; sides of breast, flanks and sides of belly more or less suffused with light brown; thigh feathers light brown. Soft part colours as in *A. v. kerearako*.

Type. ♂ with enlarged testes, Mitiaro, Cook Islands, 17 September 1973. Collected by D. T. Holyoak, field no. 213.

Measurements of type. Wing 80, tail 76, exposed culmen 17.6, tarsus 28.3 mm.

Material examined. Besides the type, five ♂♂, two ♀♀ and two unsexed birds collected the same day at the same locality. Measurements: ♂♂, wing 78, 78, 80, 80, 80, tail 75.5, 76, 78.5 (two damaged), exposed culmen 16.5, 16.7, 17.6, 18.7 (one damaged), tarsus 26.5, 26.8, 27.5, 28.6, 28.8; ♀♀, wing 76, 78.5, tail 69, 74, exposed culmen 16.5, 17.1, tarsus 27.4, 27.8; unsexed, wing 79, 79.5, tail 73, 74, exposed culmen 17.6 (one broken), tarsus 27.2, 28.5 mm.

Name. 'Kaoko' is the name by which this warbler is known to the people of Mitiaro.

Notes. Abundant in trees, bushes and tall herbaceous vegetation in all parts of Mitiaro.

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